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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/082,797	SAWADA ET AL.	
	Examiner	Art Unit	
	Pierre-Louis Desir	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 March 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *22-37 and 39-48* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *22-37 and 39-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/09/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 03/13/2007 have been fully considered but they are not persuasive.

2. Regarding claims 43-44, Applicants argue that Kauser fails to disclose or teach the limitation of 1) a query receiver configured to receive an inquiry from a user asking a location of a mobile station (to support this argument, Applicants disclose that in Kauser, no one asks about the location of mobile phone), 2) a paging control responsive to the inquiry to cause the mobile station to be paged and receive location information of the mobile station from the mobile station (to support this argument, Applicants disclose that in Kauser, the location function may be performed after a call is received from the mobile phone. Therefore, paging is not involved), 3) a transmitter configured to transmit to the user a response which comprises at lest a part of the location information (to support this argument the location of the mobile telephone is reported to police or a company. Police or a company is not a user as defined in claim 43).

Examiner respectfully disagrees with Applicants since it is clearly expressed in Kauser that a user of a mobile station requests location information which is determined using a geometric location technique in combination with GPS location coordinates, and as a result location information is transmitted to the user. In the previous Office Action, Examiner cited a portion of Kauser where it is disclosed that a mobile telephone user may request location information from the mobile telephone system provider (see col. 1, lines 51-54). In addition, Kauser discloses that the location information could be communicated to the mobile phone itself if the request for location information came from the user of the mobile phone (see col. 12, lines

32-35). Also, it is clearly disclosed in Kauser that the location of a mobile telephone is determined using a geometric location technique in combination with GPS location coordinates produced by a GPS processor/receiver within the mobile telephone (thus, the mobile location module (MLM) receives the GPS information from the GPS processor/receiver within the mobile telephone and in combination with a geometric location technique determines the location of the mobile telephone (see col. 2, lines 62-66, and col. 9, lines 19-29). Therefore, Applicants' arguments, as related to claims 43-44, are not persuasive, and the rejection stands.

Regarding claims 39, and 41-42, Applicants argue that Kojima fails to disclose or teach the limitation "a second registration control responsive to the identification signal to disable the first registration control and transmit a second registration request which comprises the identification of the transportation, whereby the mobile station becomes locatable with respect to the transportation." To support this argument, Applicants disclose that in the present invention, the second registration control is responsive to the identification signal from the transportation and disables the first registration control. On the other hand, in Kojima, the mobile station is responsive to the position registration stopping signal from the switching control station 7 and disables the position registration function.

Examiner respectfully disagrees with Applicants. As disclosed by Applicants, the mobile station is responsive to the position registration stopping signal from the switching control station 7 and disables the position registration function. Therefore with the disabling of the (first) position registration function, a second registration function is used wherein an identification number unique to the mobile space is transmitted over the position recognition channel in the mobile space, and the mobile station which receives the identification number transmits the

identification number to the base stations over a control channel to perform a position registration operation into the switching control station, and then the switching control station collates the identification number to discriminate that the mobile station has entered the mobile space which has the pertaining identification number. Therefore, the mobile station is located based on the mobile space) (see col. 2, lines 3-51).

As related to claim 22-30, and 37, Applicants argue that Kojima fails to disclose the limitation of "a transportation location finder configured to identify a communication area where the transportation is situated, based on movement information obtained from a traffic control that manages an operation of a transportation system including the transportation on which the mobile station is carried." To support this argument, Applicants disclose that Kojima is silent about the traffic control which manages an operation of a transportation system.

Examiner respectfully disagrees with Applicants while reminding Applicants that broadly written claims are broadly interpreted by Examiner and limitations from the specification are not read into the claims although the claims are interpreted in light of the specification.

Kojima shows in fig. 5 a position registration memory for mobile stations and mobile spaces provided in the switching control station 7. An ordinary mobile station is stored in a memory area 59, and the stored contents of the memory area 59 include data 54 representative of the number of a service area in which the mobile station is present and data 55 representative of information of the mobile station (data with which the system discriminates that the mobile station is a legal subscriber such as a telephone number or a product number). Information representative of the position at which a mobile space exists is stored in another memory area 58

of the position registration memory, and the stored contents of the memory area 58 include data 51 representative of a service area number, data 52 representative of mobile station information relating to the mobile space (base station opposing transmission-reception apparatus 23), and data 53 representative of an imaginary service area number.

Kojima additionally discloses (cited in the previous Office Action) that the switching control station 7 has a function of updating, when the mobile space moves in the real space and performs a position registration operation, also the position information of the mobile station from the identification number of the mobile space, in which the mobile station is present, acquired through the base station (see col. 4, lines 40-45, and col. 5, lines 3-12). As seen above, there were no wrong analogies in the passage cited above. The cited reference reads on the limitation argued by Applicants.

Applicants argue that Tuohino also fails to disclose or teach the transportation location finder.

Examiner respectfully disagrees with Applicants while referring Applicants to the previous Office Action where the Examiner disclosed that Kojima disclose the transportation location finder.

Applicants' additional arguments of Kauser and Jones as related to claims 22-30, and 37, are moot since neither Jones not Kauser was applied in the rejection of these claims.

As related to claims 31-36 (page 13 of the Remarks), Applicants argue that none of the references discloses or teaches the inventions recited in claims 31-36.

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

As related to claim 40, Applicants are referred to the response applied to claim 42.

As related to claim 46, Applicants are referred to the response applied to claim 43.

As related to claim 45, 47-48, Applicants are referred to the response applied to claim 43.

In addition, Applicants' argument that Kauser fails to disclose the limitation of "a memory that stores time schedules of transportations" are moot since Kauser was not cited for that limitation. Examiner respectfully refers Applicants to the Previous Office Action was it is clearly showed that Jones is cited for this disclosure.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 43-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Kauser et al. (Kauser), U.S. Patent No. 5724660.

Regarding claim 43, Kauser discloses a location information provider comprising a query receiver configured to receive an inquiry from a user asking a location of a mobile station (i.e., a mobile telephone user may request location information from the mobile telephone system provider) (see col. 1, lines 51-54); a paging control responsive to the inquiry to cause the mobile

station to be paged and receive information of the mobile station from the mobile station (i.e., the location information could be passed to the user from the system. Thus, the mobile station is inherently paged when receiving the location information. Also, the MLM receives location information of the mobile station i.e., GPS location coordinates from the GPS processor/receiver within the mobile telephone) (see col. 1, lines 54-55, and col. 12, lines 32-35); and a transmitter configured to transmit to the user a response which comprises at least of the location information (i.e., the location information is passed (transmitted) to the user) (see col. 1, lines 54-55, and col. 12, lines 32-35)------(a mobile telephone user may request location information from the mobile telephone system provider (see col. 1, lines 51-54). In addition, Kauser discloses that the location information could be communicated to the mobile phone itself if the request for location information came from the user of the mobile phone (see col. 12, lines 32-35). Also, it is clearly disclosed in Kauser that the location of a mobile telephone is determined using a geometric location technique in combination with GPS location coordinates produced by a GPS processor/receiver within the mobile telephone (thus, the mobile location module receives the GPS information from the GPS processor/receiver within the mobile telephone and in combination with a geometric location technique determines the location of the mobile telephone (see col. 2, lines 62-66, and col. 9, lines 19-29)).

Regarding claims 44, Kauser discloses a location information provider (see claim 43 rejection) wherein the location information comprises a geographical location of the mobile station (see col. 1, lines 15-18, 54-55, and col. 12, lines 32-35).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 39, and 41-42 are rejected under 35 U.S.C. 102(e) as being anticipated by Kojima.

Regarding claim 42, Kojima discloses a mobile station registrable with a wireless communication network that comprises at least one communication area (see abstract), comprising: a location signal receiver configured to receive from the wireless communication network a location signal indicative of an identification of an communication area in which the mobile station is situated and receive an identification signal from a transportation which comprises an identification of the transportation (i.e., in order to attain the object described above, there is provided a position registration method for a cellular mobile communications system which includes a plurality of base stations which individually take charge of a plurality of service areas in a real space, a mobile station, and a switching control station for acquiring position information of the mobile station through the base stations, comprising the steps of registering an existing position of a mobile space such as an electric train or a bus in the real space into the switching control station through the base stations using a control channel, transmitting, in the mobile space, a position recognition channel which is a radio channel for confirming whether or not the mobile station is present in the mobile space, discriminating

whether or not the position recognition channel is received by the mobile station in the mobile space thereby to discriminate whether or not the mobile station is in the mobile space, and updating, when the mobile station is in the mobile space, the registration position of the mobile station depending upon updating of the position registration of the mobile space) (see abstract, col. 2, lines 3-23); a first registration control responsive, absence the identification signal, to the location signal to transmit to the wireless communication network a first registration request which comprises the identification of the communication area, whereby the mobile station becomes locatable with respect to the communication area (i.e., the position registration method for a cellular mobile communications system may be constructed such that, if, when the mobile station is placed into a reception disabled state from a reception enabled state of the position recognition channel, a position registration operation is performed through the base stations over a control channel in a condition wherein no identification number of the mobile space is available, then the switching control station determines that the mobile station has gone out of the mobile space. Alternatively, the position registration method for a cellular communication system may be constructed such that, if the identification number of the mobile space being transmitted over the position recognition channel cannot be received any more, the mobile station performs a position registration operation over the control channel between the mobile station and the pertaining base station even if the mobile station is present in the mobile space) (see col. 2, lines 3-51); and a second registration control responsive to the identification signal to disable the first registration control and transmit a second registration request which comprises the identification of the transportation, whereby the mobile station becomes locatable with respect to the transportation (i.e., the position registration method for a cellular mobile

communication system may be constructed such that an identification number unique to the mobile space is transmitted over the position recognition channel in the mobile space, and the mobile station which receives the identification number transmits the identification number to the base stations over a control channel to perform a position registration operation into the switching control station, and then the switching control station collates the identification number to discriminate that the mobile station has entered the mobile space which has the pertaining identification number) (see col. 2, lines 3-51).

Regarding claim 39, Kojima discloses a mobile station (see claim 42 rejection) further comprising a positioning device that determines a travel status of the mobile station, which comprises a geographical location of the mobile station (see abstract, col. 4, lines 40-45, and col. 5, lines 3-12).

Regarding claim 41, Kojima discloses a mobile station (see claim 39 rejection) further comprising a transmitter that transmits the travel status (i.e., position information) in response to a paging signal (see abstract, and col. 4, lines 33-45).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 22-30, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima in view of Tuohino, U.S. Patent No. 5577264.

Regarding claim 22, Kojima discloses a location management apparatus functionally located in a mobile communication network, the location management apparatus maintaining a location of a mobile station within a mobile communication network for wirelessly communicating with the mobile station (see abstract), comprising: a communication control configured to communicate with the mobile station using the mobile communication network, and receive from the mobile station an identification of a transportation on which the mobile station is carried (i.e., the position registration method for a cellular mobile communication system may be constructed such that an identification number unique to the mobile space is transmitted over the position recognition channel in the mobile space, and the mobile station which receives the identification number transmits the identification number to the base stations over a control channel to perform a position registration operation into the switching control station) (see col. 2, lines 24-34); a location information storage in which the location of the mobile station is identifiable with reference to the identification of the transportation notified by the mobile station (see fig. 5, col. 4, lines 13-30); a transportation location finder configured to identify a communication area where the transportation is situated, based on movement information obtained from a traffic control that manages an operation of a transportation system including the transportation on which the mobile station is carried (i.e., the switching control station 7 has a function of updating, when the mobile space moves in the real space and performs a position registration operation, also the position information of the mobile station from the identification number of the mobile space, in which the mobile station is present, acquired through the base station) (see col. 4, lines 40-45, and col. 5, lines 3-12).

Although Kojima discloses an apparatus as described, Kojima does not specifically disclose an apparatus comprising a paging control configured to, when a call for the mobile station comes, access the location information storage so as to find the communication area where the transportation is situated, determined by the transportation location finder and cause a paging signal transmitted within the communication area.

However, Tuohino discloses an apparatus comprising Tuohino a paging control configured to, when a call for the mobile station comes, access the location information storage so as to find the communication area where the transportation is situated, determined by the transportation location finder and cause a paging signal transmitted within the communication area (i.e., in the call set-up, a two-stage interrogation is conducted: first, the identifier of the subsystem is obtained as the location data of the mobile station; second, the current location of the subsystem where the call will be routed to is obtained by means of the identifier of the subsystem) (see abstract, and col. 5, lines 38-62).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings as described by Kojima with the teachings of Tuohino to arrive at the claimed invention. A motivation for doing so would have been to reduce the signaling load in a cellular radio network (see col. 2, lines 9-13).

Regarding claim 23, Kojima discloses an apparatus (see claim 22 rejection) wherein the communication area is a paging area (see col. 2, lines 3-22).

Regarding claim 24, Kojima discloses an apparatus as described above (see claim 22 rejection).

Although Kojima discloses an apparatus wherein when the mobile station is in the mobile space, the registration position of the mobile station is updated depending upon updating of the position registration of the mobile space (i.e., identification of a transportation on which the mobile station is carried) (see abstract), Kojima does not specifically disclose an apparatus wherein the location information storage is updated by a registration request from the mobile station which identifies either a communication area which the mobile station enters or a transportation on which the mobile station is carried.

However, Tuohino discloses an apparatus wherein an apparatus wherein the location information storage is updated by a registration request from the mobile station, which identifies either a communication area, which the mobile station enters, or a transportation on which the mobile station is carried (see abstract and col. 4, lines 1-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described by Kojima with the teachings as described by Tuohino to arrive at the claimed invention. A motivation for doing so would have been to provide an accurate up-to-date location information database.

Regarding claim 25, Kojima discloses an apparatus (see claim 22 rejection) wherein the transportation location finder determines the communication area where the transportation is situated, using a geographical location of the transportation contained in the movement information (i.e., when the mobile space 9 moves into the service area 2 in the real space, although it becomes impossible to receive the control channel 15, the mobile station 27 does not perform a position registration operation but reads out the system information of the destination

of the movement from the position recognition channel 25 and starts use of a new control channel 13) (see col. 6, lines 16-31).

Regarding claim 26, Kojima discloses an apparatus as described above (see claim 22 rejection).

Although Kojima discloses an apparatus as described, Kojima does not specifically disclose an apparatus wherein the transportation location finder is activated to find the communication area where the transportation is situated when a communication when a call is received for the mobile station being carried on the transportation.

However, Tuohino discloses an apparatus wherein the transportation location finder is activated to find the communication area where the transportation is situated when a communication when a call is received for the mobile station being carried on the transportation (i.e., a call to a mobile station registered in the mobile subsystem is routed as follows: the location data of the mobile station stored in the cellular radio network is interrogated, the location data being the identifier of the mobile subsystem, the location data which corresponds to the subsystem identifier and is stored in the cellular radio network is interrogated, the call is routed to the subsystem and further to the mobile station by means of the location data of the subsystem) (see abstract, and col. 2, lines 55-67).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings as described by Kojima with the teachings of Tuohino to arrive at the claimed invention. A motivation for doing so would have been to reduce the signaling load in a cellular radio network (see col. 2, lines 9-13).

Regarding claim 27, Kojima discloses an apparatus (see claim 22 rejection) wherein the location information storage and the transportation location finder are located on different servers functionally connected to each other (see fig. 5, col. 4, lines 14-30).

Regarding claim 28, Kojima discloses an apparatus (see claim 22 rejection) wherein the location information storage comprises a first table in which the locations of the mobile stations are identified with reference to the transportation on which some of the mobile stations are being carried and communication areas where the other of the mobile stations are situated, and a second table in which locations of the transportation are identified with reference to communication areas where the transportations are situated (see fig. 5, col. 4, lines 14-30, and lines 59-62. Also refer to Tuohino col. 5, lines 1-17).

Regarding claim 29, Kojima discloses an apparatus (see claim 28 rejection) wherein the second table is updated by an update request from the transportation location finder receiving the movement information of the transportation (see col. 4, lines 40-45. Also refer to Tuohino col. 5, lines 1-17).

Regarding claim 30, Kojima discloses an apparatus as described above (see claim 22 rejection).

Although Kojima discloses an apparatus as described, Kojima does not specifically disclose an apparatus further comprising a receiver that receives travel information from the mobile station, which transmits the travel information in response to the paging signal initiated by the location management apparatus.

However, Tuohino discloses an apparatus further comprising a receiver that receives travel information from the mobile station, which transmits the travel information in response to

the paging signal initiated by the location management apparatus (i.e., when a MS moves to a mobile system MCPN (located e.g. on a train), the MS effects location updating to the MCPN. The MCPN, in turn, transmits the information on the location of the MS to the fixed cellular radio network, which stores the corresponding logical location area, i.e. identification data of the MCPN, as the location data of the MS, wherein a call to a mobile station registered in the mobile subsystem is routed as follows: the location data of the mobile station stored in the cellular radio network is interrogated, the location data being the identifier of the mobile subsystem, the location data which corresponds to the subsystem identifier and is stored in the cellular radio network is interrogated, the call is routed to the subsystem and further to the mobile station by means of the location data of the subsystem) (see abstract, col. 2, lines 55-67, and col. 5, lines 11-17).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings as described by Kojima with the teachings of Tuohino to arrive at the claimed invention. A motivation for doing so would have been to reduce the signaling load in a cellular radio network (see col. 2, lines 9-13).

Regarding claim 37, Kojima discloses an apparatus wherein a location of a mobile station stored in the location information storage is updated by a registration request from a transportation which identifies the transportation and the mobile station (i.e., when the mobile station is in the mobile space, the registration position of the mobile station is updated depending upon updating of the position registration of the mobile space) (see abstract).

9. Claims 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima and Tuohino, further in view of Jones, U.S. Patent No. 6363323.

Regarding claims 31-36, the combination discloses an apparatus (see claim 25 rejection) as described above.

Although the combination discloses an apparatus wherein travel information comprises a geographical location of the mobile station, and a traveling direction thereof (see abstract, col. 4, col. 6, lines 25-31, and lines 33-39. Also refer to Tuohino), the combination does not specifically disclose an apparatus wherein the travel information comprises a traveling speed; and further comprising transportation travel information storage accessible by the transportation location finder, which maintains geographical locations of the transportations (as related to claim 32); wherein the transportation travel information storage stores travel statuses of the transportations, wherein the travel status comprises a delay in schedule (as related to claim 33); wherein the travel status of the transportations are receivable by the location management apparatus (as related to claim 34); further comprising a schedule information storage that stores travel schedules of the transportations, wherein based on information stored in the transportation travel information storage and the schedule information storage, the location management apparatus determines a future location of a transportation (as related to claim 35); and wherein the travel schedules of the transportations are receivable by the location management apparatus (as related to claim 36).

However, Jones discloses a vehicle tracking system includes a sensor (e.g., a GPS sensor) and a vehicle control unit (VCU) attached to a vehicle. The sensor determines the vehicle's location based on positioning signals received from a plurality of satellites. The VCU compares

the vehicle's location to a predefined schedule. The predefined schedule includes a plurality of entries where each entry corresponds to a location along the vehicle's route of travel. Furthermore, each entry includes a location value indicating the location that corresponds with the entry and a time value indicating when the vehicle should be at the location. The VCU determines whether the vehicle is on schedule or off schedule (i.e., delay) by comparing the current location of the vehicle (as determined by the sensor) and the amount of time elapsed since the start of the route with the entries in the predefined schedule (i.e., speed information). If the vehicle is off schedule, then the VCU transmits a status message to a remote location indicating how much the vehicle is off schedule (see abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. A motivation for doing so would have been that accurate and updated information as related to location is provided.

10. Claims 40 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima in view of Jones.

Kojima discloses mobile station as described above (see claim 39 rejection).

Although Kojima discloses a mobile station wherein the travel status further comprises a traveling speed of the mobile station.

However, Jones discloses a vehicle tracking system includes a sensor (e.g., a GPS sensor) and a vehicle control unit (VCU) attached to a vehicle. The sensor determines the vehicle's location based on positioning signals received from a plurality of satellites. The VCU compares

the vehicle's location to a predefined schedule. The predefined schedule includes a plurality of entries where each entry corresponds to a location along the vehicle's route of travel. Furthermore, each entry includes a location value indicating the location that corresponds with the entry and a time value indicating when the vehicle should be at the location. The VCU determines whether the vehicle is on schedule or off schedule (i.e., delay) by comparing the current location of the vehicle (as determined by the sensor) and the amount of time elapsed since the start of the route with the entries in the predefined schedule (i.e., speed information). If the vehicle is off schedule, then the VCU transmits a status message to a remote location indicating how much the vehicle is off schedule (see abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. A motivation for doing so would have been that accurate and updated information as related to location is provided.

11. Claims 45, 47-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kauser in view of Kojima and Jones.

Regarding claim 45, Kauser discloses a location provider as described (see claim 43 rejection).

Although Kauser discloses a location information provider as described, Kauser does not specifically disclose a provider wherein the location information comprises a direction in which the mobile station is moving and a speed at which the mobile station is moving.

However, Kojima discloses an apparatus wherein a mobile station is present in a train or a bus and moves together with the mobile space (see abstract). Thus, as the train or the bus moves, the mobile station also moves. And the direction and speed of the vehicle (train or bus) would also be the direction or speed of the mobile station.

Jones discloses a vehicle tracking system includes a sensor (e.g., a GPS sensor) and a vehicle control unit (VCU) attached to a vehicle. The sensor determines the vehicle's location based on positioning signals received from a plurality of satellites. The VCU compares the vehicle's location to a predefined schedule. The predefined schedule includes a plurality of entries where each entry corresponds to a location along the vehicle's route of travel. Furthermore, each entry includes a location value indicating the location that corresponds with the entry and a time value indicating when the vehicle should be at the location. The VCU determines whether the vehicle is on schedule or off schedule by comparing the current location of the vehicle (as determined by the sensor) and the amount of time elapsed since the start of the route with the entries in the predefined schedule (i.e., speed information). If the vehicle is off schedule, then the VCU transmits a status message to a remote location indicating how much the vehicle is off schedule (see abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. A motivation for doing so would have been that accurate and updated information as related to location is provided.

Regarding claim 47, Kauser discloses a location information provider comprising: a query receiver configured to receive an inquiry from a user asking a location of a mobile station

(i.e., a mobile telephone user may request location information from the mobile telephone system provider) (see col. 1, lines 51-54).

Although Kauser discloses a provider comprising transmitting to the user a response (i.e., the location information is passed (transmitted) to the user) (see col. 1, lines 54-55, and col. 12, lines 32-35), Kauser does not specifically disclose a provider comprising a memory that stores time schedules of transportations; a location queryer responsive to the inquiry to find if the mobile station is situated on a transportation; and location estimator configured to determine, if the mobile station is situated on a transportation, a future location of the mobile station by referring to the time schedules stored in the memory; and a response which comprises the determined future location of the mobile station.

However, Kojima discloses an apparatus comprises an indication as to whether or not a mobile station is situated on a transportation (see fig. 5, col. 4, lines 13-30)

Jones discloses a vehicle tracking system includes a sensor (e.g., a GPS sensor) and a vehicle control unit (VCU) attached to a vehicle. The sensor determines the vehicle's location based on positioning signals received from a plurality of satellites. The VCU compares the vehicle's location to a predefined schedule. The predefined schedule includes a plurality of entries where each entry corresponds to a location along the vehicle's route of travel. Furthermore, each entry includes a location value indicating the location that corresponds with the entry and a time value indicating when the vehicle should be at the location. The VCU determines whether the vehicle is on schedule or off schedule by comparing the current location of the vehicle (as determined by the sensor) and the amount of time elapsed since the start of the route with the entries in the predefined schedule (i.e., speed information). If the vehicle is off

schedule, then the VCU transmits a status message to a remote location indicating how much the vehicle is off schedule (see abstract).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings as described to arrive at the claimed invention. A motivation for doing so would have been that accurate and updated information as related to location is provided.

Regarding claim 48, Kojima discloses a location information provider (see claim 47 rejection) wherein the location queryer also finds, if the mobile station is situated on a transportation, a current location of the transportation and an identification of the transportation, and the response comprises the current location of the transportation and the identification of the transportation (see abstract, fig. 5, col. 4, lines 13-30).

12. Claims 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kauser in view of Kojima.

Kauser discloses a provider as described above (see claim 43 rejection).

Although Kauser discloses a provider as described, Kauser does not specifically disclose a provider wherein the response comprises an indication as to whether or not the mobile station is situated on a transportation.

However, Kojima discloses an apparatus wherein a response comprises an indication as to whether or not a mobile station is situated on a transportation (see fig. 5, col. 4, lines 13-30).

Therefore, it would have been obvious to one of ordinary skill in the art to combine the teachings as described by Kojima with the teachings of Tuohino to arrive at the claimed

invention. A motivation for doing so would have been to reduce the signaling load in a cellular radio network (see col. 2, lines 9-13).

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pierre-Louis Desir whose telephone number is (571) 272-7799. The examiner can normally be reached on Monday-Friday 8:00AM- 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Feild can be reached on (571) 272-4090. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Pierre-Louis Desir
05/25/2007

JEAN GELIN
PRIMARY EXAMINER